AMENDMENTS TO THE CLAIMS

This listing of claims replaces all previous versions and listings of claims in this application.

1.   (Currently Amended) A method, ~~of signaling~~ comprising:

transmitting and receiving signaling messages in a functional entity for subscriber mobility management in a mobile communication system;

receiving a trace command in said functional entity, the command identifying at least one subscriber whose signaling messages are to be traced and indicating a tracer to which information obtained during tracing is ~~sent,~~ sent;

starting tracing in the functional entity, ~~which~~ wherein said tracing comprises sending to the tracer a copy of a signaling message related to the subscriber to be traced in response to receiving or transmitting the signaling message in the functional entity, wherein the copy of the signaling message sent to the tracer is identical to the signaling message of the subscriber.

2.   (Previously Presented) A method according to claim 1, wherein

the trace command also indicates the type of the signaling message to be traced, and

the copy of the signaling message is sent only if the signaling message is of the type to be traced.

3.   (Previously Presented) A method according to claim 1, wherein tracing starts from the start message of a dialogue related to the subscriber to be traced.

4.   (Previously Presented) A method according to claim 3, wherein tracing of the subscriber's signaling message stops in response to the fact that the dialogue which started tracing ends.

5.   (Previously Presented) A method according to claim 1, further comprising:

receiving a stop command of tracing in the entity, the command indicating the subscriber whose signaling message tracing is to be stopped, and

stopping tracing of the signaling messages related to said subscriber.

6.   (Previously Presented) A method according to claim 1, wherein the signaling messages of the MAP protocol are traced.

7.   (Previously Presented) A mobile communication system comprising

at least one network elements in which signaling messages are received and transmitted to manage subscriber mobility,

operating means for giving instructions to the at least one network element, wherein

the operating means are arranged to give a trace command to the network element, the command identifying at least one subscriber whose signaling messages are to be traced and indicating a tracer to which information obtained during tracing is sent,

the network element is arranged to be responsive to the trace command, and to send to the tracer a copy of a signaling message related to the subscriber in response to the network element receiving or transmitting the signaling message, wherein the copy of the signaling message sent to the tracer is identical to the signaling message related to the subscriber.

8.   (Previously Presented) A system according to claim 7, wherein

the trace command also indicates the type of the signaling message to be traced, and

the network element is arranged to copy the signaling message related to the subscriber to be traced if the signaling message is of the type to be traced.

9.   (Previously Presented) A system according to claim 7, wherein

the signaling messages to be traced are messages of the MAP protocol, and

the network element is arranged to start sending copies of the signaling messages related to the subscriber in response to the dialogue of the MAP protocol which starts after the trace command and is related to the subscriber to be traced.

10.   (Previously Presented) A network element comprising

reception means for receiving a trace command, which identifies at least one subscriber whose signaling messages are to be traced and indicates a tracer to which information obtained during tracing is sent,

separation means for separating the signaling messages related to the subscriber to be traced from other signaling messages in response to the network element receiving or transmitting the signaling message, and

means for sending to the tracer copies of the signaling messages related to the subscriber to be traced, wherein a copy of the separated signaling message sent to the tracer is identical to the separated signaling message.

11.   (Previously Presented) A network element according to claim 10, wherein

the trace command also indicates the type of the dialogue to be traced, and

the separation means are arranged to separate the signaling messages that belong to the dialogue of the type to be traced from the signaling messages of the subscriber to be traced.

12.   (Previously Presented) A network element according to claim 10, further comprising an MAP entity which is responsive to the reception means and comprises separation means and means for sending the copies.

13.   (Previously Presented) A network element comprising:

a unit configured to receive a trace command, which identifies at least one subscriber whose signaling messages are to be traced and indicates a tracer to which information obtained during tracing is sent; and

an application part configured to be responsive to the unit, to separate a signaling message related to the subscriber to be traced from other signaling messages in response to receiving or sending the signaling message in the network element; and to send to the tracer a copy of the separated signaling message, wherein the copy of the signaling message sent to the tracer is identical to the signaling message of the subscriber.

14.   (Previously Presented) A network element according to claim 13, wherein

the trace command also indicates the type of the dialogue to be traced, and the application part is further configured to separate the signaling messages that belong to the dialogue of the type to be traced from the signaling messages of the subscriber to be traced.

15.   (Previously Presented) A network element according to claim 13, wherein the application part comprises an MAP entity which is configured to be responsive to the unit and to perform the separation and sending of signaling messages.

16.   (Previously Presented) A network element according to claim 13, the network element comprising a processor configured to contain the unit and the application part.

17.   (Previously Presented) A network element according to claim 13, wherein the network element is one of a mobile switching centre, home location register and visitor location register.

18.   (New) An apparatus comprising a processor configured:

to be responsive to a trace command, which identifies at least one subscriber whose signalling messages are to be traced and indicates a tracer to which information obtained during tracing is sent,

to separate a signalling message related to the subscriber to be traced from other signalling messages received or sent by the apparatus; and

to send to the tracer a copy of the separated signalling message, wherein the copy of the signalling message sent to the tracer is identical to the signalling message of the subscriber.

19.   (New) An apparatus according to claim 18, wherein the trace command also indicates the type of the dialogue to be traced, and the processor is further configured to separate the signalling messages that belong to the dialogue of the type to be traced from the signalling messages of the subscriber to be traced.

20.   (New) A computer readable storage medium comprising program instructions, wherein execution of the program instructions causes an apparatus, configured to transmit and receive signalling messages, to start tracing, in response to a reception of a trace command identifying at least one subscriber whose signalling messages are to be traced and indicating a tracer to which information obtained during tracing is sent, which tracing comprises sending to the tracer a copy of a signalling message related to the subscriber to be traced in response to receiving or transmitting the signalling message in the functional entity, wherein the copy of the signalling message sent to the tracer is identical to the signalling message of the subscriber.